



A.D. 1831 . . . . . N<sup>o</sup> 6083.

S P E C I F I C A T I O N

OF

RICHARD TREVITHICK.

APPARATUS FOR HEATING APARTMENTS.

L O N D O N :

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## Apparatus for Heating Apartments.

### TREVITHICK'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, RICHARD TREVITHICK, of Saint Aith, in the County of Cornwall, Engineer, send greeting.

WHEREAS His present most Excellent Majesty King William the Fourth, by His Letters Patent under the Great Seal of Great Britain, bearing date  
5 at Westminster, the Twenty-first day of February, in the first year of His reign, did for Himself, His heirs and successors, give and grant unto me, the said Richard Trevithick, His especial licence, sole privilege and authority, that I, the said Richard Trevithick, my exors, admors, and assigns, and such others as I, the said Richard Trevithick, my exors, admors, or assigns, should at any time  
10 agree with, and no others, from time to time and at all times during the term of years therein mentioned, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick upon Tweed, my Invention of "A METHOD OR APPARATUS FOR HEATING APARTMENTS;" in which said Letters Patent is contained a proviso that I, the said Richard Trevithick,  
15 shall cause a particular description of the nature of my said Invention, and in what manner the same is to be performed, to be inrolled in His said Majesty's High Court of Chancery within six calendar months next and immediately after the said in part recited Letters Patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

20 NOW KNOW YE, that in compliance with the said proviso, I, the said Richard Trevithick, do hereby declare that the nature of my said Invention of a method or apparatus for heating apartments, and the manner in which the same is to be carried into effect, is shewn by the following Drawings and description, where Figure 1 represents a longitudinal vertical section through



*Trevithick's Improved Apparatus for Heating Apartments.*

the middle of a metallic vessel capable of containing a considerable quantity of water, with a fire-place in the inside, surrounded with water in all parts except at the doorway and at an opening where the smoke may pass off into a common chimney. Fig. 2, a vertical section near the fire door, at right angles to the section shewn at Fig. 1; with the sections are also shewn wheels and 5 handles, which lie out of the planes of the sections. The letters of reference indicate the same parts in both Figures. *a*, the vessel; *b*, the space for containing the water; *c*, the fire-place; *d*, the fire bars, or grating; *e*, the ash pit; *f*, an inner door, to prevent the air from entering over the fire, yet allow it to pass into the ash-pit, and thence up to the fire through the grating; *g*, an outer 10 door, to be shut when the fire is to be extinguished; *h*, a chimney or flue, to convey the smoke into a common chimney; this flue may be removed when the water boils, and then the opening of the flue may be shut, to keep in the heat, either by a door or by a plug fitting the opening; *k*, the cover of the vessel, having a rim all around, within which iron cement is to be driven to 15 make the vessel steam-tight; *l*, a hole in the middle of the cover, into which a plug is dropped having a fluted stem and a flat head ground steam-tight upon the cover; this plug or valve is for the purpose of allowing the escape of steam if it should be raised above boiling point, and the valve is taken out when it may be necessary to pour water into the vessel; *m*, four wheels, on which the 20 vessel may be easily removed from one room to another; *n*, two handles, to facilitate the removal. To use this apparatus for the warming of an apartment, the vessel is nearly filled with water, and placed so near to a chimney in another room, if more convenient, that the flue piece *h* may convey away the smoke; a fire is then lighted upon the grating *d*, and continued till the water 25 boils, when the flue piece is taken away, and the flue opening stopped with the plug or door, and also the outer fire door closed. In this state the apparatus is drawn into the apartment to be warmed, where it will continue for many hours to give off a most agreeable heat without any of that offensive odour usually experienced from stoves heated by an enclosed fire. Figures 3, 4, 5, 30 and 6 represent another form of my apparatus for heating churches or other large buildings. Figure 3, a vertical section from A to B, of Figures 5 and 6, with a representation of the flue and its flanch, which lie beyond that section and the fire doorway and its flanch, which lie nearer, and also the four wheels, two of which are on each side of the section. Figure 5, a horizontal section 35 from E to F, of Figures 3 and 4. Figure 6, a horizontal section, from G to H of Figures 3 and 4, with a view of the four handles situated at a higher level than the section, and of the fire bars at a lower level; the same letters of reference signify the same parts in all the four Figures. *a*, the outer case of



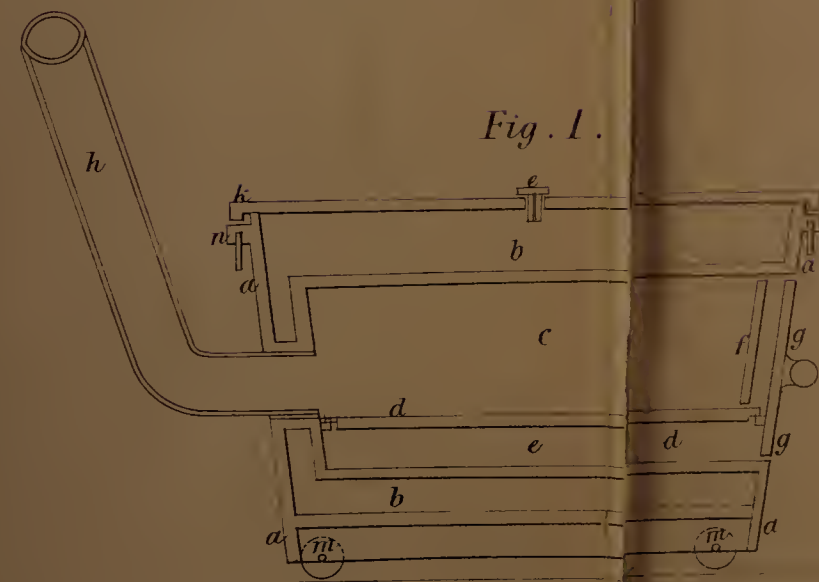


Fig. 1.

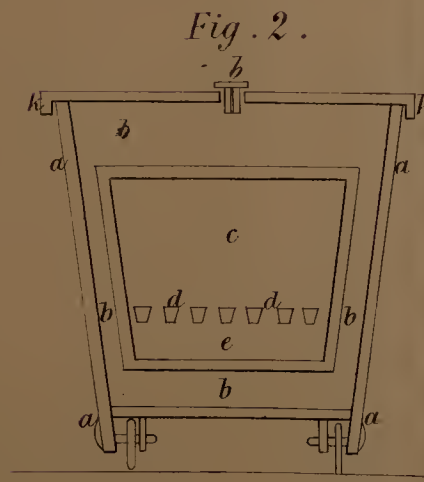


Fig. 2.



Fig. 3.

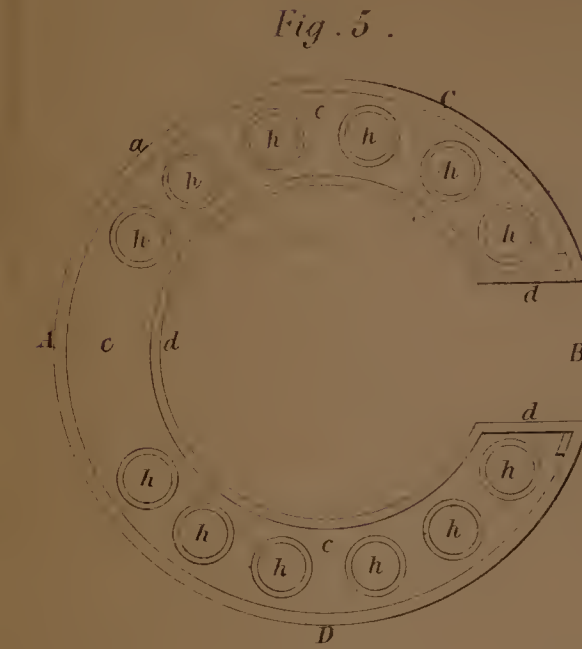


Fig. 5.

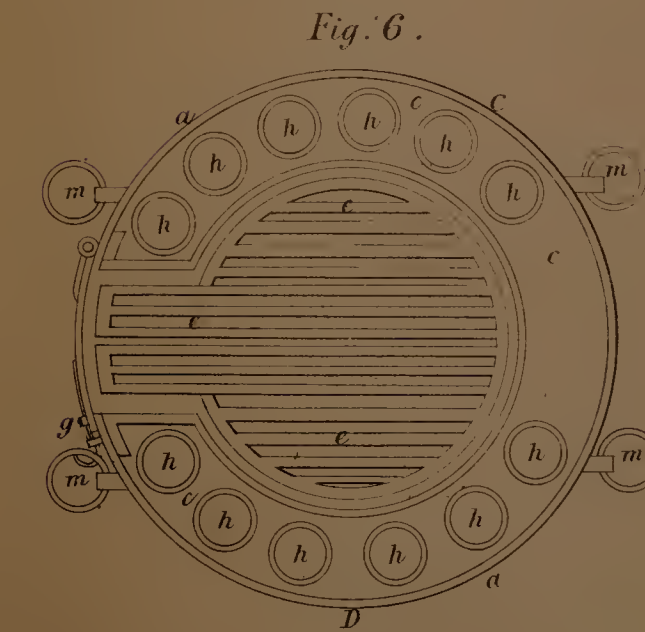


Fig. 6.

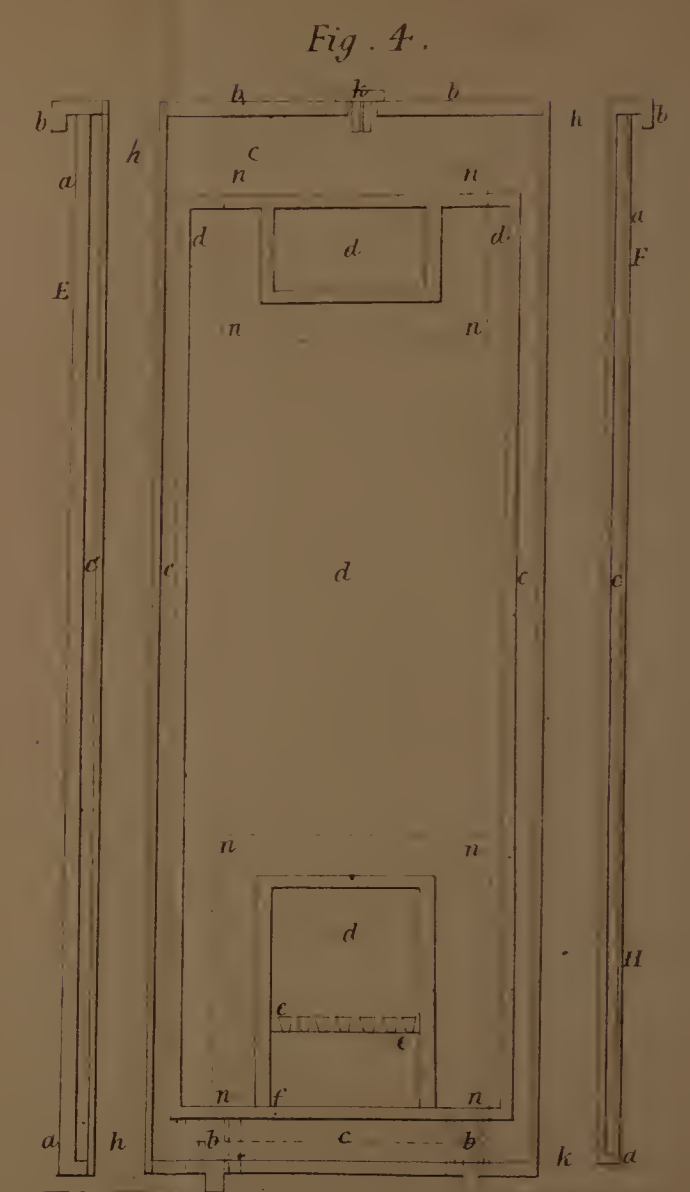


Fig. 4.

Scale of 1 Inch to the Foot.

rolled drawing is partly colored





*Trevithick's Improved Apparatus for Heating Apartments.*

the water vessel; *b*, the cover; *c*, the space for water; *d*, the fire-place and flue; *e*, the fire bars, made in two pieces, to be introduced through the fire doorway; *f*, the ash-pit; *g*, the fire door; *h*, pipes open at top and bottom, cemented into holes in the bottom, and in the cover of the water vessel; these  
 5 pipes are to admit a current of air up through them, in order the more speedily to carry the heat into the building; *k*, the aperture in the cover, to supply the vessel with water, and the plug to keep in the steam; *l*, four wheels, on which the whole is moved, each wheel revolving in a recess cast in the bottom of the outer case, as represented by dotted lines in Figures 3 and 4; *m*, four handles;  
 10 *n*, the flanches of the fire doorway and of the flue, represented in Figure 4 by dotted lines. A pipe to communicate with a chimney while the water is being heated must be made to suit locality, and therefore cannot require any description. This apparatus can be heated in a vestry room, and the fire door and flue closed and then wheeled into the church, where it will soon diffuse a most  
 15 comfortable warmth; or the heat may be kept up while standing in its place by having a constant communication with a chimney, and thus diffuse a much more salubrious heat than can be obtained by metallic or earthen stoves heated immediately by the fire.

In witness whereof, I, the said Richard Trevithick, have hereunto set my  
 20 hand and seal, this Nineteenth day of August, in the year of our Lord One thousand eight hundred and thirty-one.

RICHARD (L.S.) TREVITHICK.

AND BE IT REMEMBERED, that on the Nineteenth day of August, in the year of our Lord 1831, the aforesaid Richard Trevithick came before our said  
 25 Lord the King in His Chancery, and acknowledged the Specification aforesaid, and all and everything therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

Inrolled the Twentieth day of August, in the year of our Lord One thousand eight hundred and thirty-one.  
 30

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